

WHAT IS CLAIMED IS:

1. A cathode ray tube comprising:

an inside surface having a designated curvature;

a central portion having a transmission rate of 45-75%; and

an outside surface being substantially flat with a flatness ratio (F) satisfying a mat

hematical formula of $F = \frac{Ro}{Sd \times 1.767}$, where Ro denotes a diagonal curvature radius of the outside surface and Sd denotes a diagonal length of an effective surface of the panel; the flatness ratio (F) of the outside surface is greater than 21; and a thickness at the central portion of the panel, CFT, a thickness of a vertical axis end, Tv, and a thickness of a diagonal end, Td, satisfy conditions of $1.4 < Td/CFT < 2.0$ and $0.93 < Tv/Td < 1.00$.

2.

The cathode ray tube according to claim 1, wherein a condition of $0.146 < OAH/Sd < 0.170$, where OAH denotes a length of a skirt portion of the panel and Sd denotes the diagonal length of the effective surface.

3. A cathode ray tube comprising:

a central portion having a transmission rate of 45-75%;

an outside surface being substantially flat with a flatness ratio (F) satisfying a mathematical formula of $F = Ro/(Sd \times 1.767)$, where Ro denotes a diagonal curvature radius of the outside surface and Sd denotes a diagonal length of an effective surface of the panel, and the flatness ratio (F) of the outside surface is greater than 21; and

an inside surface having a designated curvature, in which a diagonal curvature radius of the inside surface, Rd, a vertical curvature radius of the inside surface, Rv, and a horizontal curvature radius of the inside surface, Rh, satisfy conditions of $Rv < Rd < Rh$ and $1.0 < Rh/Rd < 1.9$ and $0.3 < Rv/Rd < 0.9$.

4.

The cathode ray tube according to claim 3, wherein a condition of $0.146 < \text{OAH}/\text{Sd} < 0.170$ is satisfied, where OAH denotes a length of a skirt portion of the panel and Sd denotes the diagonal length of the effective surface.